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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,782	09/01/2000	Paul R. Marshall	PHB 34,386	5639

7590

03/31/2003

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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/653,782

Applicant(s)

Examiner

Charles Chow

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2684

### Detailed Action

1. It is acknowledged that the benefit of the foreign priority is claimed using United Kingdom 9,920,615.3 09/02/1999.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besharat et al. (US 6,219,540 B1) in view of Ichikawa et al. (US 4,506,386).

Regarding **claim 1**, Besharat discloses a method of operating a receiver (104 for signal from transmitter 902, col. 2, lines 35-45, abstract, figure in cover page).

Besharat discloses the energizing the receiver, detecting the presence of a carrier signal (quality detector 154 for detecting out-of-range, in-range, signal for controlling the power to receiver 104, abstract, col. 6, lines 19-41; col. 12, lines 1-8; the presence of acceptable transmission, col. 7, lines 36-38).

Besharat discloses the de-energising the receiver if the carrier signal is not detected (the out-of-range detection, causing suspending of power supply to receiver 104, abstract; the absence of acceptable transmission, to generate out or range signal, col. 7, lines 38-42; col. 9, lines 34-36; col. 11, lines 18-20; the out-of-range detection and disable power using power control

Art Unit: 2684

means 156 in col. 2, line 63 to col. 3, line 17). Besharat discloses the loss of signal is out-of-range (col. 9, lines 1-5 and col. 10, lines 16-19), as the carrier is not detected.

Besharat discloses the maintaining energisation of the receiver if the carrier signal is detected (the maintaining power supply to receiver 104 to enable in-range detection signal transmission). Besharat also discloses the in-range detection, to stop timer OOR 138, and to enable power supply to receiver 104 (col. 2, line 6 to col. 3, line 17).

Besharat does not clearly indicate the detecting, decoding, the decodable signal, and the de-energising the receiver if the signal is not decodable.

Ichikawa teaches the detecting, decoding, the decodable signal, and the de-energising the receiver if the signal is not decodable. Ichikawa teaches a battery saving circuit of a portable radio communication apparatus (abstract, col. 1, lines 6-8). Ichikawa teaches the decoding of the preamble code, if preamble code is not detected, disconnecting the power to the receiver (abstract). Ichikawa teaches the maintaining of the power supply to the receiver after the preamble code is detected (abstract; counted error in col. 5, lines 24-34). Ichikawa shows the preamble signal in Fig. 1A, the decoder 4 in Fig. 2, 3, and the power controller 7 in Fig. 3.

Ichikawa considers a reliable battery saving (col. 1, lines 25-27) to improving the battery saving efficiency (col. 1, lines 49-52). By including Ichikawa's technique to Besharat above, with the efficient battery power saving, the system could be upgraded of having a more reliable battery power supply by efficient battery power saving from Ichikawa. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify

Art Unit: 2684

Besharat and to include Ichikawa's efficient battery power saving with preamble decoding, such that the system could be efficient on saving the battery power.

Regarding **claim 2**, Besharat has shown above for the detecting of the presence of a carrier which is in-range (col. 4, line 66 to col. <sup>line 7</sup>2) and the in-range signal is the detected acceptable signal (col. 7, lines 20-26).

Regarding **claim 3**, referring to Ichikawa above for determining if a signal (preamble code) is decodable, and using the error count to measure the signal quality.

Regarding **claim 4**, Besharat discloses a communications system comprising a primary station having transmitter 902 for transmitting a signal and at least one secondary station 100 having a receiver 104 for receiving signals from primary station (col. 2, lines 35-45, Fig. 9). Besharat discloses the receiver comprising receiving means (antenna 102, signal quality detector 154, processor 106, Fig. 1) for detecting quality.

Besharat has shown above the power control means 156 (figure in cover page) for de-energising power supply to receiver if loss of signal due to the detected out-of-range.

Regarding **claim 5**, referring to the examiner's comment in claims 1, 2 above, for the means for determining RSSI by quality detector 154 (col. 4, line 62 to col. 5, line 1) having the quality detector 154 coupled to receiver 104, as shown in figure in cover page. Regarding the system, referring to claim 4 above.

Art Unit: 2684

Regarding **claim 6**, referring to the examiner's comment in claims 1-4 above, for the receiving means; the means for detecting the in-range signal; the means for detecting quality using RSSI and BER; the power control means 156 for deenergising the power to receiver 104 if a signal is not detected, or loss of signal due to out-of-range of receiving the unacceptable signal (col. 7, lines 24-25).

Regarding **claim 7**, referring to the examiner's comment in claims 1, 5, 6 above, for the coupling to the receiving means; for the means for determining the RSSI.

### *Conclusion*

3. In the above disclosure, Besharat discloses a system having receiver 104 for receiving signal from transmitter 902. Besharat discloses the quality detector 154 for detecting out-of-range, in-range, signal for controlling the power to receiver 104.

Besharat discloses the out-of-range detection, causing suspending of power supply to receiver 104, and the absence of acceptable transmission, to generate out of range signal.

Besharat discloses the out-of-range detection to disable power supply using power control means 156. Besharat discloses the loss of signal is out-of-range, as the carrier is not detected.

Besharat discloses the maintaining power supply to receiver 104 to enable in-range detection signal transmission. Besharat also discloses the in-range detection, to stop timer OOR 138, and to enable power supply to receiver 104.

Ichikawa teaches the detecting, decoding, the decodable signal, and the de-energising the receiver if the signal is not decodable. Ichikawa teaches a battery saving circuit of a portable radio communication apparatus. Ichikawa teaches the decoding of the preamble code, if preamble code is not detected, disconnecting the power to the receiver. Ichikawa teaches the

Art Unit: 2684

maintaining of the power supply to the receiver after the preamble code is detected.

Ichikawa shows the preamble signal in Fig. 1A, the decoder 4 in Fig. 2, 3, and the power controller 7 in Fig. 3. Ichikawa considers a reliable battery saving to improving the battery saving efficiency.

4. The cited pertinent prior arts are listed below:

- A. US 5,566,364, October 1996, Mizoguchi et al. discloses the power saving for a portable radio with diversity receivers having power source control portion 7, field detector 5, for selecting and providing the power supply to the diversity receiver which has the strong received field signal, abstract, figure in cover page.
- B. US 3,906,150, September 1975, Ivas discloses receiver is remotely turned off when the Synchronization signal is not provided.
- C. US 6,263,200 B1, July 2001, Fujimoto discloses battery power saving for radio terminal, having power control circuit, RSSI detection, judging means, for controlling the power supply to receiver based on the signal field strength (a receiver (abstract, figure in cover page; Fig. 4A, 4B; col. 1, lines 10-17; col. 19, lines 51-57).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Art Unit: 2684

Commissioner of Patents and Trademarks

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or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service Office  
whose telephone number is (703) 306-0377.



Charles Chow

March 12, 2003.